Administration Functions Administration Functions

# **Administration Functions**

This section describes the PAA Administration facility. It tells you how to execute administration functions in menu mode.

Before you start work with PAA menus, you are recommended to read the section User Interface.

To execute PAA administration functions, you must be linked to library SYSPAAA.

This section covers the following topics:

- Administration Menu
- Maintaining Deployments
- Maintaining Locations
- Maintaining Jobs
- Maintaining File Translation Tables
- System Functions

## **Administration Menu**

To access the PAA administration functions online from Natural:

- 1. Type SYSPAAA on the Natural command line or at the NEXT prompt.
- 2. Press ENTER.

To access the PAA administration functions from the PAA Reporting facility:

- 1. Type MENU on the command line of any reporting screen.
- 2. Press ENTER.

In either case, the administration facility main menu appears (following possibly the PAA banner screen).

Maintaining Deployments Administration Functions

```
15:47:10
                 **** PREDICT APPLICATION AUDIT ****
                                                       2000-09-20
 User SAGU
                       - Administration -
          Code Function
                                       Jobs Awaiting Action
                                       _____
              Deployments
                                       0 pending job(s)
            D
            L Locations
                                       2 scheduled job(s) due
              Jobs
                                       3 scheduled job(s)
            J
            O Objects
            F File Translation Tables
            S System Functions
            ? Help
            . Exit
               _____
    Code ... _
Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12--
     Help Menu Exit
```

The screen structure of the Administration facility is similar to that of the Reporting facility. From the administration screens, all reporting functions are available for the listed entities (Deployments, Locations, Jobs, and Objects), plus the administration functions described in this section.

Under the heading Jobs Awaiting Action, the following information is displayed:

Information Item	Meaning	
Pending jobs	the number of jobs in the process of loading.	
Scheduled jobs due	the number of scheduled jobs due for activation.	
Scheduled jobs	the number of scheduled jobs loaded but not yet activated.	

### Note:

PAA objects should not be processed individually. Whole sets of objects can be handled via the Jobs option. The Objects option on the Administration menu provides the same reporting functions as described in Displaying Objects.

To access a secondary menu:

- 1. Type the appropriate function code in the Code field of the Administration main menu.
- 2. Press ENTER.

# **Maintaining Deployments**

The Deployment option on the Administration main menu allows you to maintain PAA deployments.

This section covers the following topics:

- Deployment Menu (Administration)
- Overview of Administration Functions for Deployments
- Adding or Modifying a Deployment
- Defining a File Translation Table to a Deployment

## **Deployment Menu (Administration)**

If you select function code D on the Administration menu, the Deployment menu is displayed:

```
**** PREDICT APPLICATION AUDIT ****
15:47:41
                                                          2000-09-20
 User SAGU
                            - Deployment Menu -
                      Code Function
                           Add Deployment
                        Α
                           Display Deployment
                        D
                            Define FTT for Deployment
                        M
                           Modify Deployment
                        Р
                            Purge Deployment
                        R Refresh Deployment
                            Select Deployment
                        S
                            Unlock Deployment
                        ? Help
                          Exit
                            _____
          Code ....._
          Application .. _
 Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12--
      Help Menu Exit
                                                                   Canc
```

Functions Select and Display are described in the section Displaying Deployments. However, in addition to the reporting functions, the Deployment display screen also allows you to execute the EXCLUDE function (function code E) for locations in the deployment. See Maintaining Locations.

For functions Display, Add, Modify, Refresh, and Purge, you must specify a deployment unambiguously in the Application and Status fields, otherwise the function defaults to Select. You can then select a Deployment from a list using one of the available functions codes. See also Generating Selection Lists and Selecting a Deployment from a List.

If you select several deployments from a list using function code J, D M, R, P, or U, then the topmost function is processed first. On return to the Deployment Selection screen, the displayed information is updated (significantly if the function was a successful Refresh or Purge), and when you press ENTER, the next function from the top is processed.

## **Overview of Administration Functions for Deployments**

### Add

You cannot add a deployment if a deployment of the same name already exists in the PAA system file.

### **Modify**

Deployments can be modified when in either a used or dormant state.

### Dormant

Deployments in this state can have any location information altered.

### Used

Deployments that have already been used may have additional locations added to them, (both Natural as well as Predict locations) but may not have original location information altered.

## **Purge**

Purging a deployment means:

- removing the objects and deleting the object records associated with the jobs that have used the deployment,
- deleting the job records,
- deleting the deployment (record) itself.

If a domestic location in a purged deployment is not used by any other deployment, then the record in the location marking it as being under the PAA control is deleted, and the location becomes available to other PAAs. The record of any location is deleted when the last deployment referring to it is purged.

You cannot purge a deployment if any of its locations is locked, or if the deployment is in use (that is, it is being worked on by another user or by the same user in a concurrent session).

### Refresh

Refreshing a deployment means purging it minus the deployment deletion. Since the deployment record stays, the location marker and location record are also retained. A refreshed deployment can be modified.

You cannot refresh a deployment if any of its locations is locked, or if the deployment is in use (that is, it is being worked on by another user or by the same user in a concurrent session).

### Unlock

You unlock a deployment if an activity using it has terminated abnormally and has left it "in use".

### Note:

Unlocking a deployment which is legitimately in use (e.g. objects are being migrated into it or a location is being excluded from it) can have unpredictable results.

## Adding or Modifying a Deployment

Functions Add and Modify display the Deployment Definition screen. For function Add, the screen is empty; for function M, the screen shows the definitions for the selected deployment.

When Adding or Modifying locations in a deployment, keep in mind the information contained in the section Location Considerations.

Below is an example Deployment Definition screen displayed using the Modify function:

```
15:48:43
                   **** Predict Application Audit
                                                                2000-09-20
 User VMU
                           - Deployment Definition -
 Application ..... DEMO
 Status ..... PRODUCTION
 NATURAL
         Locations
                           FDIC
                                                                  FDIC
 Library DBnr Fnr
                        DBnr Fnr
                                        Library
                                                 DBnr
                                                        Fnr
                                                                DBnr
                                                                      Fnr
 Predict Locations .... N
                                                 Foreign Locations ..... N
 Enter details and press 'PF5' to update (PF3 to Exit)
 Command ===>
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12--
      Help Menu Exit Forgn Upd
                                                    PRED
                                                                      Canc
```

With the Add function, you can specify a new deployment in the Application and Status fields. The Application and Status parameters are the name and status of the PAC application that is to use the deployment.

With the Modify function, you can add locations to or delete locations from the deployment, but you cannot change the deployment application name and status. You can modify the deployment status using the RENAME direct command, but you should do this only if absolutely necessary.

The following special PF keys are available from the Deployment Definition screen:

Press this PF key	to execute this function	
PF4	Display the Foreign Part Definition screen.	
PF5	Save the deployment definition	
PF6	Dates	

The following is an example of a Foreign Part Definition screen:

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```
5:49:19 **** Predict Application Audit ****
User SAGU -Deployment Foreign Part Definition -
15:49:19
                                                                2000-09-20
 {\tt Application} \ \dots \ {\tt HEATHER}
 Status ..... PROC
                                                                     Volume/
 Node Type Fmt Dataset Name
                                                                    LMS Type
 199 FJCL S $SAGU.EMIGR-JCL-2_
 199 FCOS S $SAGU.EMIGR-COB-SRC-1___
 199 FCOL L $SAGU.EMIGR-COB-LDB-1_____
 199 FCOS S $SAGU.EMIGR-COB-SRC-2_____
 199 FCOL L $SAGU.EMIGR-COB-LDB-2_____
 Enter details and press 'PF5' to update (PF3 to Exit)
 Command ===>
 Enter-PF1---PF3---PF3---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12--
      Help Menu Exit Upd Dates
                                                                      Canc
```

The information items to be provided or modified are as follows:

Column	Meaning
Node	The Entire System Server node on which the location resides.
Туре	You can define a type to indicate the object type that can be loaded to this location.
Fmt	The location format (S for source objects, L for loadable objects).
Name	Name of the location.
Volume/LMS type	Further specification of the location, depending on the operating environment.

## **Defining a File Translation Table to a Deployment**

By selecting the F option from the main Deployment menu the user is given the option to define a file translation table to a deployment. The user can either select or add an already defined file translation table to the Natural location(s).

Similiary by selecting the Predict locations option the user can add a file translation table to Predict location.

The following screen illustrates an example Deployment Location FTT Definition:

The following special PF keys are available from the File Translation Table Definition screen:

Press this PF key	to execute this function
PF5	Updates definition
PF9	Predict location FTT definition

If you choose Y in the Predict Locations field or press PF9, you access the Deployment Predict Part FTT Definition screen. The following screen shows an example:

```
**** PREDICT APPLICATION AUDIT ****
                                                             2001-04-05
13:33:47
                - Deployment Predict Part FTT Definition -
User UKMJ
Application ..... UKMJ_APPLICATION
Status ..... UKMJ_PRODUCTION
   DBnr Fnr
                 File Translation Table
         ----
   164
         235
                 FTTO___
Enter details and press 'PF5' to update (PF3 to Exit)
Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
    Help Menu Exit Upd - +
                                                               Canc
```

Maintaining Locations Administration Functions

# **Maintaining Locations**

The Locations option on the Administration main menu allows you to maintain PAA locations. Maintaining locations means (apart from the reporting functions Display and Select) excluding and forgetting locations from PAA or from a specific deployment.

This section covers the following topics:

- Location Menu (Administration)
- Excluding Locations
- Forgetting Locations

## **Location Menu (Administration)**

If you select function code L on the Administration menu, the Location Menu is displayed:

15:49:49 User SAGU	**** PREDI	CT APPLICATION AUDIT ** -Location Menu -	**	2000-09-20
	Code	Function	Loca	tion Type
	 D	Display Location	N	 Natural
	S	Select Location	P	Predict
	E	Exclude Location	F	Foreign
	F	Forget Location		
	?	Help		
	•	Exit		
Code	e	Тур	e	
Natural Library	···	DBnr Fnr		
Predict		DBnr Fnr		
ESY Node	. DSN			
		MS Type		
		<del></del>		
Command ===>				
Enter-PF1PF2	2PF3PF4	-PF5PF6PF7PF8	-PF9PF1	0PF11PF12
Help Mer	on Farit			Canc

Functions Select and Display are similar to the corresponding functions in the Reporting facility and are described in Displaying Locations. For function Display, however, the administration function EXCLUDE is available which excludes the location from the deployment.

Function Exclude requires you to specify a location unambiguously using the parameter input fields according to Type (N, P or F for Natural, Predict or foreign respectively). The location is then excluded from the PAA (see Excluding Locations).

If you do not specify a location unambiguously, the function defaults to Select. You can then select a location from a list using one of the available functions codes. See also Generating Selection Lists and Selecting a Location from a List. If you select a location from a list using function code E, the location is excluded from the PAA.

Administration Functions Excluding Locations

## **Excluding Locations**

You can exclude locations from PAA or from a specific deployment.

To exclude a location from PAA:

Use function code E on the Location Menu and specify a location in the parameter input fields.

Or

- 1. Use function code S on the Location Menu and specify selection criteria in the parameter input fields to list locations (see Generating Selection Lists).
- 2. Select a location from the resulting list with function code E. This excludes the location from the PAA.

Excluding a location from the PAA means removing the objects written into it by the PAA, deleting the object records, removing the location from any deployments, removing the marker record from the location if it is a domestic location, and deleting the location record from the PAA system file. The location is now available to other PAAs.

To exclude a location from a Deployment:

1. Use function code D on the Location Menu and specify selection criteria in the parameter input fields to display the location.

Or:

Generate a list of locations using function code S and selection criteria in the input parameters of the Locations Menu. Then select a location from the resulting list with function code D. The location is displayed, showing the list of deployments that refer to the location.

2. Select the deployment with function code E. This excludes the location from the deployment (the deployment is removed from the list on the Location Display screen).

Excluding a location from a deployment means removing the objects written into it by the jobs that use the deployment, deleting the object records, and removing the location from the deployment. If the location is not listed in any other deployment, it is also excluded from the PAA.

If after the exclusion of a location a deployment has no location left, it is not automatically purged, it becomes modifiable. Excluding locations from single deployments does not affect job records.

## **Forgetting Locations**

You can forget locations from PAA or from a specific deployment.

## To forget a location from PAA

• Use function code F on the Location Menu and specify a location in the parameter input fields.

Or:

- 1. Use function code S on the Location Menu and specify selection criteria in the parameter input fields to list locations (see Generating Selection Lists).
- 2. Select a location from the resulting list with function code F. This forgets the location from the PAA.

The forget location function works as the exclude function except it does not delete the current objects put there by the PAA.

Maintaining Jobs Administration Functions

The forget location function works as the exclude function except it does not delete the current objects put there by the PAA.

### To forget a location from a Deployment:

1. Use function code D on the Location Menu and specify selection criteria in the parameter input fields to display the location.

Or:

Generate a list of locations using function code S and selection criteria in the input parameters of the Locations Menu. Then select a location from the resulting list with function code D.

The location is displayed, showing the list of deployments that refer to the location.

2. Select the deployment with function code F.

This forgets the location from the deployment (the deployment is removed from the list on the Location Display

The forget location function works as the exclude function except it does not delete the current objects put there by the PAA.

If after the forgetting a location a deployment has no location left, it is not automatically purged, it becomes modifiable. Forgetting locations from single deployments does not affect job records.

# **Maintaining Jobs**

A PAA job is the set of PAA objects and control records created by a load. The Jobs option on the Administration main menu allows you to maintain PAA jobs.

This section covers the following topics:

- Job Menu (Administration)
- Administration Functions for Jobs

## **Job Menu (Administration)**

If you select function code J on the Administration menu, the Job menu is displayed:

```
15:57:44
                  **** PREDICT APPLICATION AUDIT ****
                                                            97-01-16
 User SAGU
                             - Job Menu -
                      Code Function
                        D
                           Display Job
                        S
                           Select Jobs
                        Α
                           Activate Job
                          Backout Job
                        В
                           Finalize Job
                        P
                          Purge Job
                          Purge Natural Buffer Pool
                          Help
                           Exit
                           _____
          Code ....._
          Application .. ___
          Status ..... __
          Number ..... __
          State ....._
 Command ===>
 Enter-PF1---PF3---PF3---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12--
      Help Menu Exit
                                                                 Canc
```

You identify a job using the available parameter input fields:

Parameter	Meaning
Application	Application name of the deployment on which the load operation was performed. If you specify this, you must also specify the Status.
Status	Status part of the deployment name. If you specify this, you must also specify the Application.
Number	Job load number.
State	Job state. Possible values: P (pending), S (scheduled), A (ACTIVATED), F (FINALIZED), B (BACKED OUT). A job is pending if it is stuck in the process of loading.

Functions Select and Display are similar to the corresponding functions in the Reporting Facility, see Displaying Jobs. In a list of jobs, the functions Activate (A), Finalize (F), Back out (B), Purge (P), and Purge Natural Buffer Pool (N) are also available, under the conditions described in Administration Functions for Jobs.

For functions Display, Activate, Finalize, Back out, Purge, and Purge Natural Buffer Pool, you must specify a job unambiguously using the input parameters, otherwise the function defaults to select.

If you select several jobs from a list using function code D, O, Y, A, F, B, P, or N, then the topmost function is processed first. On return to the Job Selection screen, the displayed information is updated (significantly if the function was a successful Activate, Finalize, Back out, or Purge), and when you press ENTER, the next function from the top is processed.

### **Administration Functions for Jobs**

Administration functions for jobs provide the means of making objects operational and removing objects under certain conditions.

### **Activate**

By activating a job, you activate the objects that belong to it as a result of a load operation. Activation an object means:

- Optionally backing up a like object in the location.
- Assigning a PAA version number to the object being activated.
- Making the object operational (the back-up object is unoperational).
- Updating the object record in the PAA system file.

A job can be activated only if its state is "scheduled", its schedule time has come, and no jobs with earlier schedule times remain unactivated.

See also Activating Loaded Objects.

### **Finalize**

When a job is finalized, all objects whose records precede the records of the job's objects in the succession chains are removed. Only jobs in ACTIVATED state can be finalized.

### **Back-out**

When a job is backed out, all its objects are deleted from their locations (or, in the case of backed-up foreign objects, from the PAA system file). Their records are marked "removed" and excluded from the object succession chains. If a currently active object is removed that was backed up at activation, then this back-up object is made current.

Only jobs in ACTIVATED or FINALIZED state can be backed out. A job cannot be backed out if any of its objects has been superseded by subsequent activations and the superseding objects still exist.

### Purge

Purging a job means backing it out and deleting all its object records as well as the job record. Any job can be purged.

## **Purge Natural Buffer pool**

You can purge objects with the same name as Natural objects in a job from the Natural buffer pools of their locations.

# **Maintaining File Translation Tables**

Administration Functions System Functions

```
12:01:24
             **** PREDICT APPLICATION AUDIT ****
                                                            2001-04-05
User UKMJ
              - File Translation Table Maintenance Menu -
                Code Sub-Function
                  A Add File Translation Table
                  C Copy File Translation Table
                  D Display File Translation Table
                  M Modify File Translation Table
                  P Purge File Translation Table
                  S Select File Translation Tables
                  ? Help
                  . Exit
                     _____
                                     FTT type 0 to add
  Code ....__
  FTT name ...... ____
  New FTT name ....
Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
    Help Menu Exit
                                                               Canc
```

	* PREDICT APPLICA File Translation			2001-04-05
Table name	. FTTC		FTT type Version Modified	1
DBnr Origin	DBnr Dest.	Fnr Origin	Fnr Dest.	
<del></del>	<del></del>		<del></del>	
<del></del>				
<del></del>		<del></del>	<del></del>	
<del></del>				
	Page	1	Page	1
	rage	<u> </u>	rage	+
Command ===>				
Enter-PF1PF2PF3	PF4PF5PF	6PF7PF8	-PF9PF10PF	11PF12
Help Menu Exi	t Dates	- +	Seq-D Save	Canc

# **System Functions**

If you select option S from the Administration menu, the System Functions menu is displayed.

The system functions are available for monitoring and/or modification purposes.

PAA State Report Administration Functions

- PAA State Report
- Lock Report
- System Defaults
- Applymods
- User Exits
- Foreign Object Type Description

```
15:50:29
                  **** PREDICT APPLICATION AUDIT ****
                                                         2000-09-20
 User SAGU
                          - System Functions -
                      Code Function
                           PAA State Report
                          Lock Report
                          System Defaults
                        S
                        M Applymods
                          User Exits
                          Foreign Object Type Description
                           ______
          Code ....._
 Command ===>
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12-
      Help Menu Exit
```

## **PAA State Report**

A PAA State Report contains:

- the next available job number,
- the date and time of the last migration to the PAA,
- the database and file numbers of the PAA system file,
- the version of PAA at work,
- the PAA installation date,
- a list of all pending jobs,
- a list of all backed-out jobs.

Administration Functions Lock Report

## **Lock Report**

A Lock Report contains:

- a list of all pending jobs,
- a list of all deployments currently in use,
- a list of all locked Natural, Predict, and foreign locations.

### **System Defaults**

The System Defaults which can be displayed and modified are:

- Natural and Predict default DBnr and Fnr,
- the maximum number of held ISNs (the ET parameter),
- the maximum number of teleprocessing transactions between Natural task rolls (the TP parameter),
- the title to appear at the top of the PAA screens,
- the banner screen switch (Y(es) or N(o)),
- the number of the Entire System Server node on which the PAA runs.

## **Applymods**

Applymod 1, when switched on, prevents a PAA job from being backed out. If any of the job's (versioned) objects has no predecessor in its object version succession chain.

Applymod 2, when switched on, prevents a PAA job from being backed out. If any of the job's (versioned) objects has no successor in its object version succession chain.

Applymod 3, when switched off allows any job to be purged. When switched on allows any job which has no current objects to be purged. If a job has at least one current object then the following error message is returned:

```
PAA0053 (E): This job cannot be purged.
```

Applymod 4, when switched on, should any object of a particular PAA job fail to load then the whole PAA job will be re-scheduled including all of its objects. Thus no objects in the PAA job are loaded/activated. The state of the production system is thus returned to a state that it was in before the PAC/PAA job was started. When switched off then only the unsuccessful objects remain unloaded and successful objects will be loaded/activated.

### **User Exits**

There are three user exits built into PAA. Each of them consists of one or more CALLNATs to a named subprogram which you must write. A user exit CALLNAT is executed only if you have "switched on" the exit.

The User Exits function is provided for the purpose of switching the exits on (Y for "YES") or off (N for "NO).

• User exit 1 will invoke PAAEX001 (normally in library SYSPAAUS) when the PAA is started. In PAAEX001, you can program pre-PAA session actions, e.g. the recording of the PAA starter's data in a site log. PAA communicates with PAAEX001 by a parameter USER-AREA (A50), whose value can be subsequently retrieved at user exit 2.

- User exit 2 will invoke PAAEX002 (normally in library SYSPAAUS) when the PAA is terminated. In PAAEX002, you can program post-PAA session actions, e.g. the recording of the PAA terminator's data in a site log. PAA communicates with PAAEX002 by a parameter USER-AREA (A50), which retains the value assigned to it at user exit 1.
- User exit 3 will invoke MIGEX003 (normally in library SYSPACUS) whenever the PAA accesses a location in a Natural or Predict system file. In MIGEX003, you can specify a password or a cipher needed to access the file. PAA communicates with MIGEX003 by the following four parameters:

DBID (N3)	Database number of the file to be accessed
FNR (N3)	File number of the file to be accessed
PSWD (A8)	Password to be passed to the file (or use CIPH)
CIPH (A8)	Cipher to be passed to the file (or use PSWD)

• User exit 4 is the node security exit for Entire System Server. When using Entire System Server to access a remote node, this exit allows you to specify a different user ID and password for protected partitioned datasets.

## **Foreign Object Type Description**

The Foreign Object Type Description function lists all the foreign object types (the 4 bytes of Subtype2 plus the 1 byte of Subtype3) that occur in the deployment records and allows you to create, view, and change the descriptions of the types.

If a deployment that contains foreign object type descriptions is deleted then it is possible to remove these foreign object type descriptions from PAA. On entering the foreign object type description list types that are no longer used will be modifiable. Then on blanking out all descriptions of this type, the type will then be removed from PAA.